

**IN THE CLAIMS:**

1 Please cancel claims 1-7, 9-19, 21-27, 29-33, 35, 37-38, 40-43, and 50

1 1. – 19. (Cancelled)

1 20. (Previously Presented) A method for allocating a spare disk to replace a failed disk in  
2 a network storage system, comprising:  
3 maintaining a plurality of volumes in the network storage system, each volume  
4 associated with a set of disk storage units;  
5 maintaining a plurality of spare disks in the network storage system;  
6 attempting to determine the best spare disk by selecting those disks from the plu-  
7 rality of spare disks which meet at least one rule;  
8 replacing the failed disk with the best spare disk;  
9 in the event that no spare disk meets the at least one rule, selecting a spare disk  
10 which violates the at least one rule as a selected disk; and  
11 notifying an administrator that the selected spare disk violates the rule.

21. -27. (Cancelled)

1 28. (Previously Presented) A network storage system, comprising:  
2 means for maintaining a plurality of volumes in the network storage system, each  
3 volume associated with a set of disk storage units;  
4 means for maintaining a plurality of spare disks in the network storage system;  
5 means for attempting to determine a best spare disk by selecting those disks from  
6 the plurality of spare disks which meet at least one rule;  
7 means for replacing the failed disk with the best spare disk;

1 in the event that no spare disk meets the at least one rule, means for selecting a  
2 spare disk which violates the at least one rule as a selected disk; and  
3 means for notifying an administrator that the selected spare disk violates the rule.

1 29. – 33. (Cancelled)

1 34. (Previously Presented) A file server in a network storage system, comprising:

2 a storage adapter to connect to a plurality of disk storage units in the network  
3 storage system;

4 an operating system to maintain a plurality of volumes, each volume associated  
5 with a set of disk storage units, the set of disk storage units selected from the plurality of  
6 disk storage units;

7 the operating system maintaining a plurality of spare disks units selected from the  
8 plurality of disk storage units;

9 the operating system choosing a best spare disk of the plurality of spare disks to  
10 replace a failed disk, the failed disk associated with any volume of the network storage  
11 system;

12 the operating system attempting to determine a best spare disk by selecting those  
13 disks from the plurality of spare disks which meet at least one rule;

14 the operating system replacing the failed disk with the best spare disk;

15 in the event that no spare disk meets the at least one rule, the operating system se-  
16 lecting a spare disk which violates the at least one rule as a selected disk; and

17 the operating system notifying an administrator that the selected spare disk vio-  
18 lates the rule.

1 35. – 38. (Cancelled)

1 39. (Currently Amended) ~~The method of claim 13~~ A method for allocating a spare disk  
2 to replace a failed disk in a network storage system, comprising:

3        maintaining a plurality of volumes in the network storage system, each volume  
4        associated with a set of disk storage units;  
5        maintaining a plurality of spare disks in the network storage system;  
6        choosing a best spare disk of the plurality of spare disks to replace a failed disk,  
7        the failed disk associated with any volume of the network storage system, wherein the  
8        best spare disk is chosen based upon a comparison of the speed of the spare disks and the  
9        failed disk; and  
10       replacing the failed disk with the best spare disk.

1       40. – 44. (Cancelled)

1       45. (Previously Presented) A computer implemented method for allocating a spare stor-  
2       age device to replace a failed storage device in a network storage system, comprising:  
3               identifying a set of spare storage devices in the network storage system; and  
4               selecting a particular spare storage device of the set of spare storage devices to re-  
5       place the failed storage device, the particular spare storage device selected using a size  
6       policy in which preference is given to a spare storage device with minimum storage space  
7       in excess of the storage space of the failed disk.

1       46. (Previously Presented) A computer implemented method for allocating a spare stor-  
2       age device to replace a failed storage device in a network storage system, comprising:  
3               identifying a set of spare storage devices in the network storage system; and  
4               selecting a best spare storage device of the set of spare storage devices to replace  
5       the failed storage device, the best spare storage device selected using a speed policy in  
6       which preference is given to a spare storage device with a speed closest to that of the  
7       failed disk.

1 47. (Previously Presented) The method of claim 46 wherein the speed is a rotation  
2 speed.

1 48. (Previously Presented) The method of claim 46 wherein the speed is a data read  
2 speed.

1 49. (Previously Presented) The method of claim 46 wherein the speed is a data write  
2 speed.

50. (Cancelled)

1 51. (Previously Presented) A computer readable medium comprising executable pro-  
2 gram instructions for allocating a spare storage device to replace a failed storage device  
3 in a network storage system, the executable program instructions adapted for:  
4 identifying a set of spare storage devices in the network storage system; and  
5 selecting a particular spare storage device of the set of spare storage devices to re-  
6 place the failed storage device, the particular spare storage device selected using a size  
7 policy in which preference is given to a spare storage device with minimum storage space  
8 in excess of the storage space of the failed disk.

1 52. (Previously Presented) A computer readable medium comprising executable pro-  
2 gram instructions for allocating a spare storage device to replace a failed storage device  
3 in a network storage system, the executable program instructions adapted for:  
4 identifying a set of spare storage devices in the network storage system; and  
5 selecting a best spare storage device of the set of spare storage devices to replace  
6 the failed storage device, the best spare storage device selected using a speed policy in  
7 which preference is given to a spare storage device with a speed closest to that of the  
8 failed disk.